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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,048	04/08/2004	Sadanand V. Deshpande	FIS920030397US1	3047
29154	7590	04/06/2007		
FREDERICK W. GIBB, III Gibb & Rahman, LLC 2568-A RIVA ROAD SUITE 304 ANNAPOLIS, MD 21401			EXAMINER INGHAM, JOHN C	
			ART UNIT	PAPER NUMBER
			2814	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/709,048	Applicant(s) DESHPANDE ET AL.	
	Examiner John C. Ingham	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,12-14 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,12-14 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The affidavit filed on 22 January 2007 under 37 CFR 1.131 is sufficient to overcome the Chen reference.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1-2, 4-9, 12-14, and 26-29** rejected under 35 U.S.C. 103(a) as being unpatentable over Luning (US 6,506,642) and Nandakumar (US 6,479,339).
4. Regarding claims **1-2, 4-9, 12-14, and 26-29**, Luning discloses in Figure 6 an integrated circuit structure comprising: a substrate (40); first-type transistors (left side nFET) on said substrate, wherein said first-type transistors comprise first gate conductors (41) and first spacers (60) adjacent said first gate conductors; second-type transistors (right side pFET) on said substrate, wherein said second-type transistors comprise second gate conductors (42), said first spacers (44) adjacent said second gate conductors, said first spacers adjacent said second gate conductors and second spacers (60); first-type (N type) source/drain impurity implants (61) in areas of said substrate completely outside of and adjacent to said first spacers of said first gate conductors; second-type (P type) source/drain impurity implants (62) in areas of said

Art Unit: 2814

substrate completely outside of and adjacent to said second spacers of said second gate conductors, wherein said first type impurity is spaced closer to said first gate conductors than said second type impurity is spaced from said second gate conductors; first silicide regions (64) proximate said first spacers of first-type transistors; and second silicide regions (63) proximate said second spacers of said second-type transistors, wherein said second silicide regions are farther from said second gate conductors than said first silicide regions are from said first gate conductors ($W3$ greater than $W2$).

Luning does not disclose an etch stop layer on said first spacers of the second-type transistor, and second spacers on said etch stop layer, wherein said etch stop layer is only on said first spacers that are adjacent said second gate conductors and said etch stop layer is not on said first spacers that are adjacent said first gate conductors; wherein said second spacers are only on said etch stop layer on said first spacers that are adjacent said second gate conductors, and said second spacers are not adjacent said first spacers that are adjacent said first gate conductors. Luning does show that the double spacer is only on the second-type transistor.

Nandakumar teaches in Fig 3C that a nitride etch stop layer is formed on one transistor, between spacer layers of oxide, in order to allow selective etching (col 5 ln 21-23) and results in no additional masking steps (col 2 ln 6-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the etch stop of Nandakumar on the device of Luning in order to form mixed voltage circuits without the need for additional masking steps.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Ingham whose telephone number is (571) 272-8793. The examiner can normally be reached on M-F, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John C Ingham
Examiner
Art Unit 2814

jci



HOWARD WEISS
PRIMARY EXAMINER